PARADYNE®

Hotwire® 8312/8314 MVL® and ReachDSL™/MVL Cards
Installation Instructions

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What is a Hotwire 8312/8314 MVL or ReachDSL/MVL Card?

A Hotwire® 8312/8314 MVL® card is a circuit card assembly that contains 12 MVL ports, an interface to the Network Service Provider (NSP), and a processor. The processor controls the MVL ports and forwards the packet traffic to and from the uplink and MVL interfaces.

When the MVL card is used in a Hotwire Digital Subscriber Line Access Multiplexer (DSLAM) or 8620/8820 GranDSLAM chassis and connected to the Hotwire 6310 MVL Modem, it provides high-speed Internet or intranet access over traditional twisted-pair telephone wiring.

The 8312/8314 ReachDSL™/MVL cards are based on the 8312/8314 MVL cards and provide the following enhancements:

- Maximum on-hook Tx power is increased from 10 to 12dB
- Maximum off-hook Tx power is increased from 7 to 12dB
- Maximum line rate is increased from 768 to 960 kbps.

The 8312/8314 ReachDSL/MVL cards interoperate with either the 6310 MVL Modem or the 6350 ReachDSL Modem.

Card	Chassis Type	Uplink Interface Type
8312	8610/8810 DSLAM or 8820 GranDSLAM	Ethernet
8314	8620/8820 GranDSLAM	ATM via backplane bus

Product Documentation Online

Complete documentation for this product is available at **www.paradyne.com**. Select *Library* → *Technical Manuals* → *Hotwire DSL & MVL Systems.*

Select the following documents:

8000-A2-GB22
Hotwire Management Communications Controller (MCC) Card, IP Conservative, User's Guide

8000-A2-GB26
Hotwire MVL, ReachDSL/MVL, RADSL, IDSL, and SDSL Cards, Models 8310, 8312/8314, 8510/8373/8374, 8303/8304, and 8343/8344, User's Guide

To order a paper copy of a Paradyne document:

- Within the U.S.A., call 1-800-PARADYNE (1-800-727-2396)
- Outside the U.S.A., call 1-727-530-8623

Card Installation Planning

- Each Hotwire chassis is shipped with one of the following installation documents:

Document Number	Document Title
8610-A2-GN10	*Hotwire 8610 DSLAM Installation Instructions*
8810-A2-GN11	*Hotwire 8810 DSLAM Installation Instructions*
8620-A2-GN20	*Hotwire 8620 GranDSLAM Installation Guide*
8820-A2-GN20	*Hotwire 8820 GranDSLAM Installation Guide*

- Refer to one of the above installation documents to:
  - — Install and set up the Hotwire DSLAM or GranDSLAM chassis
  - — Install the Hotwire 8312/8314 MVL or ReachDSL/MVL card
  - — Connect cables

- After the card is installed, there are configuration procedures that must be performed before you can begin to use the cards for Internet or intranet connectivity. Refer to the *Hotwire MVL, ReachDSL/MVL, RADSL, IDSL, and SDSL Cards, User's Guide* for more detailed configuration procedures. Access this document using the instructions in *Product Documentation Online*.

Installing the 8312/8314 Card

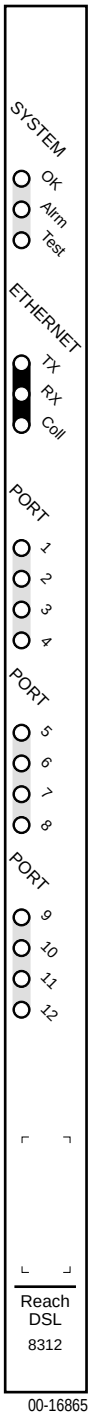
▶ Procedure

To install the Hotwire 8312/8314 MVL or ReachDSL/MVL Card in a Hotwire chassis:

1. If there is a filler plate covering the slot, remove it.
2. Insert the card into the card guides of the slot on the chassis. For the 8610 DSLAM, ensure that the components are facing up.
3. Carefully slide the card into the slot. Gently, but firmly, push the card until it engages its mating connectors on the backplane.
4. Verify that the OK SYSTEM indicator on the card's faceplate is ON (green). If not, refer to the appropriate chassis installation document.
5. Secure the card by fastening the screws on each end of the faceplate. This is required to maintain proper gasket pressure on the faceplate as well as proper air flow.

8312 MVL and ReachDSL/MVL Card LEDs

The following table describes the meaning and states of the LEDs on the Hotwire 8312 card faceplate.



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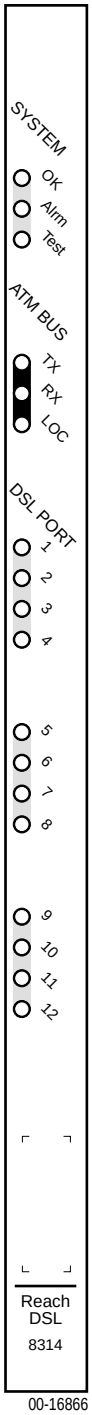
Type	LED	LED is . . .	Indicating . . .
SYSTEM	OK	Green, Winking	Card functioning normally. Winking describes a recurring pulse when the LED is ON longer than OFF at a ratio of approximately 10:1.
		Green, On	Card failure. System processing functions have stopped.
		Off	No power to cards.
	Alrm	Yellow, On	Alarm present on the card. Ethernet interface is not being detected.
		Off	No alarms.
	Test	Yellow, On	Test in progress.
		Off	No tests.
ETHERNET	TX	Green, Blinking	A packet is being sent. LED blinks on and off about five times per second.
		Off	Inactive.
	RX	Green, Blinking	A packet is being received. LED blinks on and off about five times per second.
		Off	Inactive.
	Coll	Off	Normal operation.
		Yellow, Blinking	A collision has been detected. LED blinks on and off 2–4 times per second.
PORT	1–12	Green, On	DSL link is up.
		Off	DSL link is down or disabled.
		Green, Blinking	Port test is in progress. LED blinks on and off about five times per second.
		Green, Reverse Winking	DSL link is down. Reverse winking describes a recurring pulse when the LED is OFF longer than ON at a ratio of approximately 16:1.

8314 MVL and ReachDSL/MVL Card LEDs

The following table describes the meaning and states of the LEDs on the Hotwire 8314 card faceplate.



Type	LED	LED is . . .	Indicating . . .
SYSTEM	OK	Green, Winking	Card functioning normally. Winking describes a recurring pulse when the LED is ON longer than OFF at a ratio of approximately 10:1.
		Green, On	Card failure. System processing functions have stopped.
		Off	No power to card.
	Alrm	Yellow, On	Alarm is present on card.
		Off	No alarms.
	Test	Yellow, On	Test in progress.
		Off	No tests.
ATM BUS	TX	Green, Blinking	Card has placed cells on the backplane bus. LED blinks on and off 2–4 times per second.
		Off	Inactive.
	RX	Green, Blinking	Card has received cells from the backplane bus. LED blinks on and off 2–4 times per second.
		Off	Inactive.
	LOC	Off	Normal operation.
		Yellow, On	Card not receiving a clock signal from the GranDSLAM backplane bus.
DSL PORT	1 – 12	Green, On	DSL link is up.
		Off	DSL link is disabled.
		Green, Blinking	Port test is in progress. LED blinks in an on/off ratio of 1:1.
		Green, Reverse Winking	DSL link is down. Reverse winking describes a recurring pulse when the LED is OFF longer than ON at a ratio of approximately 16:1.

MVL and ReachDSL/MVL Card Technical Specifications

Specifications	Criteria*
Size	Length: 10.4 inches (26.42 cm) Height: 11.15 inches (28.32 cm) Width: 0.8 inches (2.03 cm)
Weight	Approximately 2.0 lbs. (0.9 kg)
Approvals Safety Certifications	 Refer to the equipment's label for approvals on product.
Power **Maximum Power Dissipation** MVL 8312 MVL 8314 ReachDSL/MVL 8312 ReachDSL/MVL 8314	The card contains a DC-to-DC converter that requires –48V (nominal) power input (–40.0 to –60.0 VDC). The –48V power is distributed through the chassis backplane. 13.4 watts 15.2 watts 14.4 watts 16.2 watts
Physical Environment Operating temperature Storage temperature Relative humidity Shock and vibration	 32° to 122° F (0° to 50° C) –4° F to 158° F (–20° C to 70° C) 5% to 85% (noncondensing) Withstands normal shipping and handling.

* Criteria of technical specifications are subject to change without notice.

Warranty, Sales, Service, and Training Information

Contact your local sales representative, service representative, or distributor directly for any help needed. For additional information concerning warranty, sales, service, repair, installation, documentation, training, distributor locations, or Paradyne worldwide office locations, use one of the following methods:

- **Internet:** Visit the Paradyne World Wide Web site at **www.paradyne.com**. (Be sure to register your warranty at **www.paradyne.com/warranty**.)
- **Telephone:** Call our automated system to receive current information by fax or to speak with a company representative.
  - Within the U.S.A., call 1-800-870-2221
  - Outside the U.S.A., call 1-727-530-2340

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Patent Notification

Hotwire MVL products are protected by U.S. Patents: 4,637,035, 4,744,092, 4,669,090, 5,291,521 and 5,280,503. Other U.S. and foreign patents pending.